

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: M. HANNUKSELA
Serial No.: Not yet assigned
Filed: May 15, 2001
For: VIDEO CODING
Group: Not yet assigned
Examiner: Not yet assigned

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

May 15, 2001

Sir:

Prior to examination, please amend the above-identified application as follows.

IN THE SPECIFICATION

Please replace the paragraph beginning at page 21, line 31, with the following rewritten paragraph:

-- The invention is not intended to be limited to the video coding protocols discussed above: these are intended to be merely exemplary. The invention is applicable to any video coding protocol in which a choice of error concealment methods is available. The addition of the information as discussed above allows a receiving decoder to determine which would be the best type of error concealment method to use. --

IN THE CLAIMS

Page 23, line 1, insert --What is claimed is:--.

Please amend the claims as follows:

3. (Amended) A method according to claim 1, wherein the indicator is included in a picture header.

12. (Amended) A portable radio communications device including at least one of a video encoder and a video decoder,

wherein said video encoder comprises an input for receiving a video signal representing a sequence of pictures, a calculator to calculate a measure of the similarity between a first and a second picture, and a comparator to compare the measure of similarity with a predetermined criterion of similarity and to output an indicator indicating the concealment method to be used by a subsequent decoder, the comparator being arranged to output an indicator indicating that a non-temporally predictive concealment method should be used when the measure of similarity does not meet the predetermined criterion, and, when the measure of similarity meets the predetermined criterion, to output an indicator indicating that a temporally predictive concealment method should be used by a subsequent decoder, and

wherein said video decoder comprises an encoded video signal representing a sequence of pictures, a controller for identifying within the video signal for each picture to be decoded an indicator indicating the type of concealment method to be used in the decoding process, and decoding the encoded video signal using a concealment method as indicated by the indicator.

Please add new claims 13 and 14 as follows:

-- 13. A method according to claim 2, wherein the indicator is included in a picture header.

14. A portable radio communications device including at least one of a video encoder and a video decoder,

wherein said video encoder comprises a comparator for comparing a first picture with a second picture, a processor for calculating a measure of the similarity between the first and the second pictures and comparing the measure of similarity with a predetermined criterion of similarity, the processor being arranged to output an indicator in response to the measure of similarity wherein, when the measure of similarity does not meet the predetermined criterion, the indicator is updated and when the measure of similarity meets the predetermined criterion, the indicator is unchanged, and

wherein said video decoder comprises an encoded video signal representing a sequence of pictures, a controller for identifying within the video signal for each picture to be decoded an indicator indicating the type of concealment method to be used in the decoding process, and decoding the encoded video signal using a concealment method as indicated by the indicator.--

IN THE ABSTRACT

Please amend the Abstract of the invention as follows:

-- A method of encoding a video signal representing a sequence of pictures, the method comprising comparing a first picture with a second picture, calculating a measure of the similarity between the first and the second pictures, comparing the measure of similarity with a predetermined criterion of similarity and, when the measure of similarity does not meet the predetermined criterion of similarity, outputting an indicator indicating that a non-temporally predictive error concealment method should be used by a subsequent decoder and, when the measure of similarity meets the predetermined criterion of similarity, outputting an indicator indicating that a temporally predictive error concealment method should be used by a subsequent decoder. --

REMARKS

Attached hereto is a marked-up copy version of the changes made to the specification, claims and abstract by the current Amendment. The attached page is captioned "Version with markings to show changes made".

Entry of the above amendments prior to examination is respectfully requested.

Please charge any shortage in fees due in connection with the filing of this paper, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (367.40118X00).

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Please replace the paragraph beginning at page 21, line 31, with the following rewritten paragraph:

-- The invention is not intended to be limited to the video coding protocols discussed above: these are intended to be merely exemplary. The invention is applicable to any video coding protocol in which a choice of error concealment methods is available. The addition of the information as discussed above allows a receiving decoder to determine which would be the best type of error concealment method to use.

~~What is claimed is:~~

IN THE CLAIMS

Please amend the claims as follows:

3. (Amended) A method according to claim 1, ~~or 2~~ wherein the indicator is included in a picture header.

12. (Amended) A portable radio communications device including at least one of a video ~~an encoder according to claim 9~~

or 10 and/or a and a video decoder according to claim 10 or 11,

wherein said video encoder comprises an input for receiving a video signal representing a sequence of pictures, a calculator to calculate a measure of the similarity between a first and a second picture, and a comparator to compare the measure of similarity with a predetermined criterion of similarity and to output an indicator indicating the concealment method to be used by a subsequent decoder, the comparator being arranged to output an indicator indicating that a non-temporally predictive concealment method should be used when the measure of similarity does not meet the predetermined criterion, and, when the measure of similarity meets the predetermined criterion, to output an indicator indicating that a temporally predictive concealment method should be used by a subsequent decoder, and

wherein said video decoder comprises an encoded video signal representing a sequence of pictures, a controller for identifying within the video signal for each picture to be decoded an indicator indicating the type of concealment method to be used in the decoding process, and decoding the encoded video signal using a concealment method as indicated by the indicator.

IN THE ABSTRACT

Please amend the Abstract of the invention as follows:

-- A method of encoding a video signal representing a sequence

of pictures, the method comprising comparing a first picture with a second picture, calculating a measure of the similarity between the first and the second pictures, comparing the measure of similarity with a predetermined criterion of similarity and, when the measure of similarity does not meet the predetermined criterion of similarity, outputting an indicator indicating that a non-temporally predictive error concealment method should be used by a subsequent decoder and, when the measure of similarity meets the predetermined criterion of similarity, outputting an indicator indicating that a temporally predictive error concealment method should be used by a subsequent decoder. --

~~Fig 5a~~